

SEMESTER EXAMINATION DECEMBER-2023

Course Name: - B.TECH

Semester:- I

Paper Name: - Programming for Problem Solving

Paper Code:- TES-101

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer.

Max Marks-70

समय- 3 घण्टे + 20 मिनट प्रति घंटे अतिरिक्त-दृष्टिबाधित एवं सह लेखक परीक्षार्थियों के लिए।

अधिकतम अंक-70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries 3 mark. All questions are compulsory.
- Section B- Answer any 5 out of 7 given questions in maximum one hundred fifty (150) words. Each question carries 7 marks.
- Section C- Answer any 2 out of 3 given questions in maximum three hundred (300) words. Each question carries 10 marks.

निर्देश:

- प्रश्न पत्र में तीन खण्ड अ, ब, व स हैं। सभी खण्ड अनिवार्य हैं।
- खण्ड-अ में प्रत्येक प्रश्न तीन अंक का है। सभी प्रश्न अनिवार्य हैं।
- खण्ड-ब में सात प्रश्नों में से किन्हीं पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें। प्रत्येक प्रश्न सात अंक का है।
- खण्ड-स में तीन प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर अधिकतम (250-300) शब्दों में दें। प्रत्येक प्रश्न 10 अंक का है।

Section - A (खण्ड-अ)

Objective Questions (वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions.

5x3 =15

(i) C language was invented in which laboratories.

- (a) Uniliver Labs
- (b) IBM Labs
- (c) AT&T Bell Labs
- (d) Verizon Labs

(ii) An Identifier can start with.?

- (a) Alphabet
- (b) Underscore (_) sign
- (c) Any character that can be typed on a keyboard
- (d) Option A & Option B

(iii) What is the default C Storage Class for a variable.?

- (a) static
- (b) auto
- (c) register
- (d) extern

(iv) What is the priority of operators *, / and % in C language.?

- (a) * > / > %
- (b) % > * > /
- (c) Both % = / , * are same
- (d) All three operators *, / and % are same.

(v). A function which calls itself is called a ____ function.

- (a) Self Function
- (b) Auto Function
- (c) Recursive Function
- (d) Static Function

Section - B (खण्ड-ब)

Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions in maximum 150 words.

5x7=35

निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें।

- (i). Write a program to find Factorial of a number?
- (ii). What is the difference between Compiler and Interpreter and also explain the concept of assembler?
- (iii). Explain Data Types in C?
- (iv). What do you mean by array? Explain the types, advantages and Limitations of Array?
- (v). Write short notes on Storage class in c?
- (vi). Write Difference between the For, While and do-While loop.?
- (vii). Explain headers files in c ?

Section - C (खण्ड-स)

Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question in maximum 300 words.

2x10=20

निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर अधिकतम 300 शब्दों में दें।

- (i). Explain the concept of pointers?
- (ii). Explain the concept of Flow chart and symbol used in flow chart? Also draw the flow chart to check the number is positive or negative.
- (iii). Explain dynamic memory allocation concept with proper example.